and 6 are described without names. The describing and naming of new species of galls without the insects has been the subject of considerable criticism, but since it gives us a definite record of these species the reviewer is inclined to favor the violation of this law of nomenclature. The work closes with an extensive bibliography, a systematic index of gall insects, and an index of scientific and common names of host plants.—MEL T. COOK.

NOTES FOR STUDENTS

Influence of environment on wheat.—One of the most persistent theories in evolutionary discussions of cultivated plants is that of the "breaking up of types," supposed to be brought about when plants are grown from seed under conditions differing markedly from those under which the parent plants were grown. Evidence for this view has been largely of an observational nature and capable of other interpretation. Experimental evidence bearing on the question has been brought out by LECLERC and LEAVITT[5] in reporting a series of cultures of wheat in widely different sections of the United States. The plan of the experiments was as follows: In one series Kubanka wheat grown in South Dakota was distributed to stations in Kansas and California, a sample being likewise grown in South Dakota. Every year a sample from each station was sent to each of the others and grown there. A similar series of cultures was carried out with Crimean wheat in Kansas, Texas, and California. Some of the experiments have now been continued for five years.

The results may be briefly summarized. The original pure type of Kubanka wheat from South Dakota showed entirely different morphological characteristics and chemical composition at the different stations. The characteristics of the wheats of one variety at any particular station were uniform for the wheat whenever grown at that station, no matter from which station the seed had been derived. Thus, when South Dakota wheat was grown in Kansas or California, it assumed characteristics different from those which it originally had, and peculiar for each region; but if, after several generations, these wheats were again transferred to South Dakota the resulting crop assumed all the characteristics of the same variety grown continuously in South Dakota. The series with Crimean wheat gave exactly similar results.

The experiments show that wheats of one variety from several sources, when grown in the same locality, differ but little in morphological characteristics and chemical composition, but if grown in different localities from seed of the same source, they differ widely from each other. There is a marked response to environment, but all the plants of a pure variety respond in the same way. There is no tendency toward "breaking up" of the type on account of change in environment.—H. HASSELBRING.

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5 LE CLERC, J. A., and LEAVITT, S., Tri-local experiments on the influence of environment on the composition of wheat. U.S. Dept. Agr., Bur. Chem., Bull. 128. pp. 18. 1910.